

**Remarks/Arguments**

The preceding amendments and following remarks are submitted in response to the final Office Action mailed November 13, 2006, setting a three month shortened statutory response ending February 13, 2007. Claims 1, 19, 30, 36, 37, 40, and 41 have been amended and claims 8 and 34 have been canceled. Support for the amendments and new claims is found in the specification, claims, and drawings as originally filed. No new matter has been added. Claims 1-7, 9-33, and 35-42 are pending in this Application. Reconsideration, examination and allowance of all pending claims are respectfully requested.

**35 U.S.C. § 103 Rejections**

Claims 1-12, 16-24 and 28-39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Krockner et al. (US 2003/0195640) in view of Abrams (U.S. Patent No. 6,608,560). While the Brooks reference (US 5,841,112) was not recited in the statement of rejection, the reference was discussed in the body of the rejection. Applicants assume, for purposes of this response, that the rejection was intended to be over the combination of Krockner, Abrams, and Brooks. If this is not the case, Applicants respectfully request clarification of the rejection.

Applicants respectfully disagree with the rejection. However, to move this case along, clarifying amendments have been made to independent claim 1, which now recites:

1. (currently amended) An HVAC controller for use in controlling one or more components of an HVAC system, the HVAC controller comprising:  
a controller configured to control one or more components of the HVAC system during normal operation of the HVAC system, said controller adapted to determine if one or more service events occurred for one or more of the components of the HVAC system, wherein said controller makes the determination without first requiring a prompting by a user of the controller; and  
a display unit configured to display servicing information when a service event is determined by the controller.

Krockner et al. do not appear to teach such a controller. The Examiner acknowledges that Krockner et al. fail to teach a controller configured to control one or more components of the

HVAC system during normal operation, or to determine one or more service events, and a display unit configured to display servicing information when a service event is needed for an HVAC system. The Examiner asserts that Brooks teaches a programmable controller that is programmed to effect features directly related to service diagnostic as well as normal operation. The Examiner then asserts that it would have been obvious to include the programmable controller adapted to both normal operation and service diagnostics, taught by Brooks, in the device of Krocker because it would provide convenience and a compact system.

Applicants respectfully traverse the rejection. Krocker et al. appear to use a service tool 10, which is separate from the HVAC controller 44, to run diagnostic tests on the HVAC system. The service tool 10 does not appear to control one or more components of the HVAC system during normal operation of the HVAC system, as recited in claim 1. Further, the service tool of Krocker et al. does not appear to determine if a service event occurred without user input. Rather, it appears that the service technician, using the service tool 10, determines if one or more service events occurred.

Abrams teaches, "This troubleshooting information is preferably provided to users on demand" and "a service assistance device for a climate control system includes an input device via which a user can initiate an automated call for service of the climate control system" (see column 2, lines 2-3 and 22-25. Abrams also teaches "input devices 106, 108 are provided for a user to input a request for automated assistance and/or a call for service" (column 3, lines 40-42), "a push-button switch 202 (corresponding to user input device 106) by which a user can input a request for automated assistance, a push-button switch 204 (corresponding to user input device 108) by which a user can input a call for service by an HVAC contractor" (column 4, lines 9-13). Abrams thus appears to teach a device that provides troubleshooting information to a user on demand by the user, and then the user may determine if a service event occurred from the troubleshooting information and may input a call for service if necessary.

The examiner then asserts that the concepts and advantages of having a controller adapted to determine if one of more service events occurred within the system is well known and expected in the art, citing Brooks as teaching a controller programmed to effect features directly

Application Serial No. 10/726,243  
Response dated January 23, 2007  
Reply to Office Action dated November 13, 2006

relating to service diagnostics. Brooks does not, however, appear to teach a controller that detects a service event automatically or without prompting from a user. Brooks thus does not appear to teach what Krockner et al. and Abrams lack.

Brooks appears to teach a programmable controller system that performs service diagnostic functions upon activation by the user. See column 5, lines 30-33 and column 6, lines 41-46. Brooks states, "in a preferred embodiment, the service diagnostics system is activated by actuating preselected keys in a step 200" (emphasis added; column 7, lines 6-8). Brooks does not appear to teach a controller that determines if a service event occurred without first requiring a prompting by a user of the controller, or without having to be prompted by a user via the interface, as is recited in independent claims 1 and 36, respectively. Further, Brooks does not appear to teach a controller that automatically determines if one or more service events occurred, as is recited in claims 19, 30 and 37.

As can be seen, none of Krockner et al., Abrams, or Brooks appears to teach or suggest each element of the independent claims. Each of Krockner et al, Abrams, and Brooks appears to teach controllers that perform diagnostic activities only after activation, prompting, or some other input by the user. Thus, even if one were to combine the teachings of Krockner et al., Abrams, and Brooks, one would not arrive at the claimed controller and system. Additionally, there is no suggestion or motivation for one of ordinary skill in the art to modify the system and method of Krockner et al. to achieve the claimed HVAC controller or system of independent claims 1, 19, 30, 36, or 37. For these and other reasons, independent claims 1, 19, 30, 36, and 37, and claims 2-18, 20-29, 31-35, 38-39 dependent thereon, are also believed to be clearly patentable over Krockner et al. in view of Abrams and Brooks.

Specifically with respect to dependent claims 6, 7, and 16, the Examiner asserts that Abrams teaches a controller that determines if one or more service events occurred by receiving a service event indicator from at least one of said one or more components (claim 6), by determining if an equipment service event timer expired (claim 7), and by polling at least selected components of the HVAC system (claim 16), citing column 4, lines 43-52 of Abrams as teaching each of these elements. Applicants respectfully disagree. This portion of Abrams

Application Serial No. 10/726,243  
Response dated January 23, 2007  
Reply to Office Action dated November 13, 2006

actually states, "The troubleshooting information provided by the service assistance device 100 in block 304 of FIG. 3 may be relatively general..." Abrams also states, "troubleshooting information is provided to the user in response to the request for assistance." (emphasis added) See column 4, lines 31-32. Abrams appears to teach the user inputting a request for assistance, and the controller providing information in response to that request. See column 3, lines 40-42, column 4, lines 10-11, 22-27, 53-57, column 5, lines 36-42 and 50-54. The service assistance device 100 of Abrams does not appear to receive a service event indicator from at least one of said one or more components (claim 6), determine if an equipment service event timer expired (claim 7), or

poll one or more components of the HVAC system in order to determine if one or more service events occurred (claim 16), but rather appears to merely respond to a user request for service information. Abrams thus does not appear to teach or suggest the elements of claims 6, 7, and 16. In addition, neither Krockner et al. nor Brooks appears to teach these elements, thus any combination of Krockner et al., Abrams, and Brooks must also fail to teach the elements of claims 6, 7, and 16. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 13-15 are rejected as being unpatentable over Krockner et al. in view of Abrams and further in view of Poth (US 6,741,915). For at least the reasons set forth above, Krockner et al. and Abrams do not appear to teach or suggest the basic elements of independent claim 1, from which claims 13-15 depend. Applicants note that the Brooks reference appears to have been cited against independent claim 1, but was not cited or discussed with reference to dependent claims 13-15. Clarification of the grounds of rejection is respectfully requested. Poth does not appear to teach or suggest what Krockner et al. and Abrams lack. Thus any combination of Krockner et al., Abrams, and Poth must also fail to teach or suggest the elements of claims 13-15. Further, if the rejection was intended to be made on the basis of Krockner et al., Abrams, Brooks, and Poth, the rejection still fails because none of the cited references, either alone or in combination, teaches or suggests the elements of the claims, for at least the reasons set forth above. Reconsideration and withdrawal of the rejection are respectfully requested.

Application Serial No. 10/726,243  
Response dated January 23, 2007  
Reply to Office Action dated November 13, 2006

Claims 25-27 are rejected as being unpatentable over Krockner et al. in view of Abrams and further in view of Bennett (US 5,877,957). For at least the reasons set forth above, Krockner et al. and Abrams do not appear to teach or suggest the basic elements of independent claim 19, from which claims 25-27 depend. Bennett does not appear to teach or suggest what Krockner et al. and Abrams lack. Thus any combination of Krockner et al., Abrams, and Bennett must also fail to teach or suggest the elements of claims 25-27. This rejection also appears to be missing the Brooks reference as it was used against the independent claim 19, from which claims 25-27 depend. For at least the reasons set forth above, none of Krockner, Abrams, and Brooks, either alone or in combination, teach or suggest the elements of the claims. Bennett does not appear to provide what the other references lack. Reconsideration and withdrawal of the rejection are respectfully requested.

Claim 40 is rejected as being unpatentable over Rosen (US 6,824,069). The Examiner asserts that Rosen teach a thermostat for controlling an HVAC system under normal conditions. The Examiner acknowledges that Rosen does not teach the controller determining if one or more service events occurred without receiving control signals from outside the housing. The Examiner then discusses Brooks as teaching a controller that includes features directly related to service diagnostics as well as relating to normal operation. It appears the rejection was intended to have been made over the combination of Rosen and Brooks. Clarification of the rejection is respectfully requested.

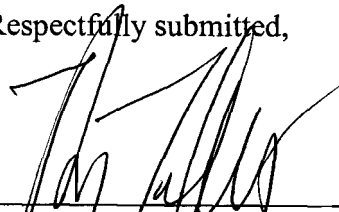
As discussed above, Brooks appears to teach the controller responding to user activation of a service diagnostic feature. See column 6, lines 36-50. Brooks does not appear to teach or suggest a controller that determines if one or more service events occurred without requiring prompting from a user via a user interface of the controller, as recited in claim 40. Thus, even if one were to combine the teachings of Rosen and Brooks, one would not arrive at the claimed thermostat. Further, there is no motivation for one of ordinary skill in the art to modify the thermostat of Rosen as modified by Brooks to achieve the claimed thermostat. Reconsideration and withdrawal of the rejection are respectfully requested.

Application Serial No. 10/726,243  
Response dated January 23, 2007  
Reply to Office Action dated November 13, 2006

Claims 41 and 42 are rejected as being unpatentable over Abrams in view of Krockner. Independent claim 41, as amended, recites a method for using a thermostat including the step of automatically detecting a service event related to the operation of one or more of the HVAC components. Neither Abrams nor Krockner et al. appear to teach or suggest such a method step. As discussed above, Abrams appears to teach a device that processes a user request for assistance and troubleshooting information. Krockner et al. appear to teach a service tool used by a technician. Even if one were to combine the teachings of Abrams and Krockner, one would not arrive at the claimed method. Further, there is no motivation for one of ordinary skill in the art to modify the method of Abrams and Krockner et al. to achieve the claimed method. Reconsideration and withdrawal of the rejection are respectfully requested.

Reexamination and reconsideration are respectfully requested. It is respectfully submitted that the claims are now in condition for allowance, and issuance of a Notice of Allowance in due course is requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 359-9348.

Respectfully submitted,



---

Brian N. Tufte, Reg. No. 38,638  
CROMPTON, SEAGER & TUFTE, LLC  
1221 Nicollet Avenue, Suite 800  
Minneapolis, MN 55403-2402  
Telephone: (612) 677-9050  
Facsimile: (612) 359-9349

Dated: January 23, 2007